

REMARKS

The application has been reviewed in light of the Office Action dated December 23, 2004. Claims 1-64 are pending, with claims 1, 30 and 59-64 being in independent form. By this Amendment, Applicant has amended independent claims 1, 30 and 59-64, to clarify the claimed invention. Applicant respectfully submits that no new matter is introduced by the claim amendments. Support

The Office Action stated that the oath or declaration is defective because it does not identify the mailing or post office address of each inventor.

An Application Data Sheet identifying the mailing or post office address of each inventor is attached hereto as **Exhibit A**.

Claims 1-3, 5, 9, 10-21, 23, 30-32, 34, 38, 39-50, 52 and 59-64 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 4,535,981 to Watanabe et al. Claims 1-3, 5, 9-22, 25-32, 34, 38-51 and 54-64 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,996,989 to Cahill et al. Claims 1, 6-8, 30 and 35-37 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,277,417 to Moritake et al. Claims 1-4 and 30-33 were rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,318,716 to Okuda. According to the Office Action, claims 24 and 53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claims 1, 30 and 59-64 are patentable over the cited art, for at least the following reasons.

This application relates to techniques for effectively performing a sheet transfer in an image forming process. Ideally sheets are fed through one at a time from a sheet feeding section to an image forming section.

Conventional sheet feeding techniques typically use a sheet feed roller coupled with either a friction member or a separation pad. In each instance, a portion (i.e. a fraction) of the surface of the friction member or separation pad comes in contact with the sheet feed roller. However, such conventional sheet feeding mechanisms often experience the problem of feeding multiple sheets simultaneously to the image forming section.

Applicant found that the multiple sheet feeding problem can be minimized by using a contact face (brought in contact with a sheet feed roller) in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller. The narrow raised edge forms substantially the entirety of said contact face and is adjacent to an end of said tilt face, and substantially the entirety of the contact face is in contact with said sheet feed roller (see, for example, Figs. 4-7 of this application). By this Amendment, Applicant has amended independent claims 1, 30 and 59-64 to clarify these features.

As discussed in the application at, for example, the paragraph bridging pages 24 and 25, by reducing the contact face of the tilt member in contact with the sheet feed roller, the width by which the topmost sheet material is nipped is reduced from a conventional nipped width D (such as in the cited art) to a reduced nipped width C. The reduction in the nipped width results in a smaller force which is applied by the trailing edge of the topmost sheet material to the next sheet material to feed out the same. Therefore, it is possible to prevent multiple sheet materials from being fed simultaneously.

None of the cited art discloses or suggests the claimed invention.

Watanabe, as understood by Applicant, is directed to improvements to paper sheet feeding for preventing paper sheets from wrinkling, bending, etc., during withdrawal of a paper sheet cassette from a copy machine or the like. The Office Action contends that friction member 72 of Watanabe discloses the contact surface of the claimed invention, and that the portion of the friction member 72 in contact with the roller 2 forms an edge.

Fig. 3 of Watanabe shows that only a portion of the friction member 72 is in contact with the roller 2.

Applicant finds no teaching or suggestion in Watanabe of a contact face in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, wherein the narrow raised edge forms substantially the entirety of said contact face and is adjacent to an end of said tilt face, and substantially the entirety of the contact face is in contact with the sheet feed roller, as provided by the claimed invention described in the amended claims.

Cahill, as understood by Applicant, is directed to a friction pad for exerting different forces on a pick roll of a sheet feeding apparatus depending on the position of the fed sheet along its feed path. According to the Office Action, separator pad 56 of Cahill discloses the contact surface of the claimed invention in the shape of a narrow raised edge.

However, like the background art discussed in the application, only a central portion of the separator pad 56 of Cahill is in contact with pick roll 24. Cahill, like Watanabe, does not disclose or suggest a contact face in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, wherein the narrow raised

edge forms substantially the entirety of said contact face and is adjacent to an end of said tilt face, and substantially the entirety of the contact face is in contact with the sheet feed roller, as provided by the claimed invention described in the amended claims.

Moritake, as understood by Applicant, is directed to a sheet-material transporting device which includes a separation roller which is rotated in a predetermined direction, and a retarding member having an opposing surface opposing the separation roller. The Office Action contends that plate 46 of Moritake discloses a tilt member having a narrow raised edge.

However, it is noted that the portion of the plate 46 of Moritake which the Office Action contends corresponds to a narrow raised edge does not contact the separation roller 44.

Moreover, Applicant finds no teaching or suggestion in Moritake of a contact face in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, wherein the narrow raised edge forms substantially the entirety of said contact face and is adjacent to an end of said tilt face, and substantially the entirety of the contact face is in contact with the sheet feed roller, as provided by the claimed invention described in the amended claims.

Okuda, as understood by Applicant, is directed to a sheet separating apparatus, for a copy machine, printer or facsimile machine, which purportedly avoids vibration causing unpleasant noise. According to the Office Action, pad holder 43 of Okuda discloses a tilt member and separating pad 17 discloses a contact face in the shape of an edge.

Applicant finds no teaching or suggestion in Okuda, however, of a contact face in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, wherein the narrow raised edge forms substantially the entirety of said contact face and is

adjacent to an end of said tilt face, and substantially the entirety of the contact face is in contact with the sheet feed roller, as provided by the claimed invention described in the amended claims.

Since the cited art does not disclose or suggest each and every feature of the claimed invention, the cited art does not render the claimed invention unpatentable.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 1, 30 and 59-64, and the claims depending therefrom, are patentable over the cited references.


If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition, and the Commissioner is authorized to charge the requisite fees to our Deposit Account No. 03-3125.

The Office is hereby authorized to charge any additional fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Allowance of this application is respectfully requested.

Respectfully submitted,



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